

North American Nitidulidae (Coleoptera)

V. Species of *Epuraea* related to *corticina* Erichson

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The present account concerns several North American nitidulid beetles belonging to the genus *Epuraea*. These beetles comprise a more or less related group which include our largest species, about 4 mm. long, except for the still larger *monogama* and *liebecki*, 5-6.3 mm. long. Also three of the species exhibit the most extreme development of the male mesotibiae. Although the evidence is clear only for *corticina*, possibly all of the *Epuraea* herein described feed as larvae and adults on spores of fungi which are parasitic on trees.

This group of *Epuraea* may be separated as follows.

- | | | |
|----|--|------------------------------|
| 1 | Eleventh antennal segment about as large as ninth and tenth combined (Fig. 20); length 3.7-4.1 mm. | <i>eximia</i> new species |
| 1' | Eleventh antennal segment much smaller, of normal size (Figs. 8, 32, 44, 56) | 2 |
| 2 | Hind angles of prothorax prominent and acute, forming an angle of about 85° | <i>corticina</i> Erichson |
| 2' | Hind angles of prothorax less prominent, obtuse, forming an angle of about 110°-120° | 3 |
| 3 | Anterior emargination of prothorax shallow (Fig. 27), with depth of about .09mm.; submentum triangular (Fig. 31); male mesotibiae very feebly produced inward (Fig. 29) | <i>lengi</i> new species |
| 3' | Anterior emargination of prothorax deep, with depth of .125-.187 mm.; submentum indistinctly trapezoidal (Figs. 43, 55), male mesotibiae very strongly produced inward (Figs. 41, 53) | 4 |
| 4. | Eleventh antennal segment with reduced apex (Fig. 44); anterior prothoracic emargination (Fig. 39) about .187 mm. deep; male mesotibiae more strongly produced inward (Fig. 41) | <i>alternata</i> new species |
| 4' | Eleventh antennal segment with well developed apex (Fig. 56); anterior prothoracic emargination (Fig. 51) about .125 mm. deep; male mesotibiae less strongly produced inward (Fig. 53) | <i>rufida</i> Melsheimer |

Epuraea eximia new species

(Figs. 13-24)

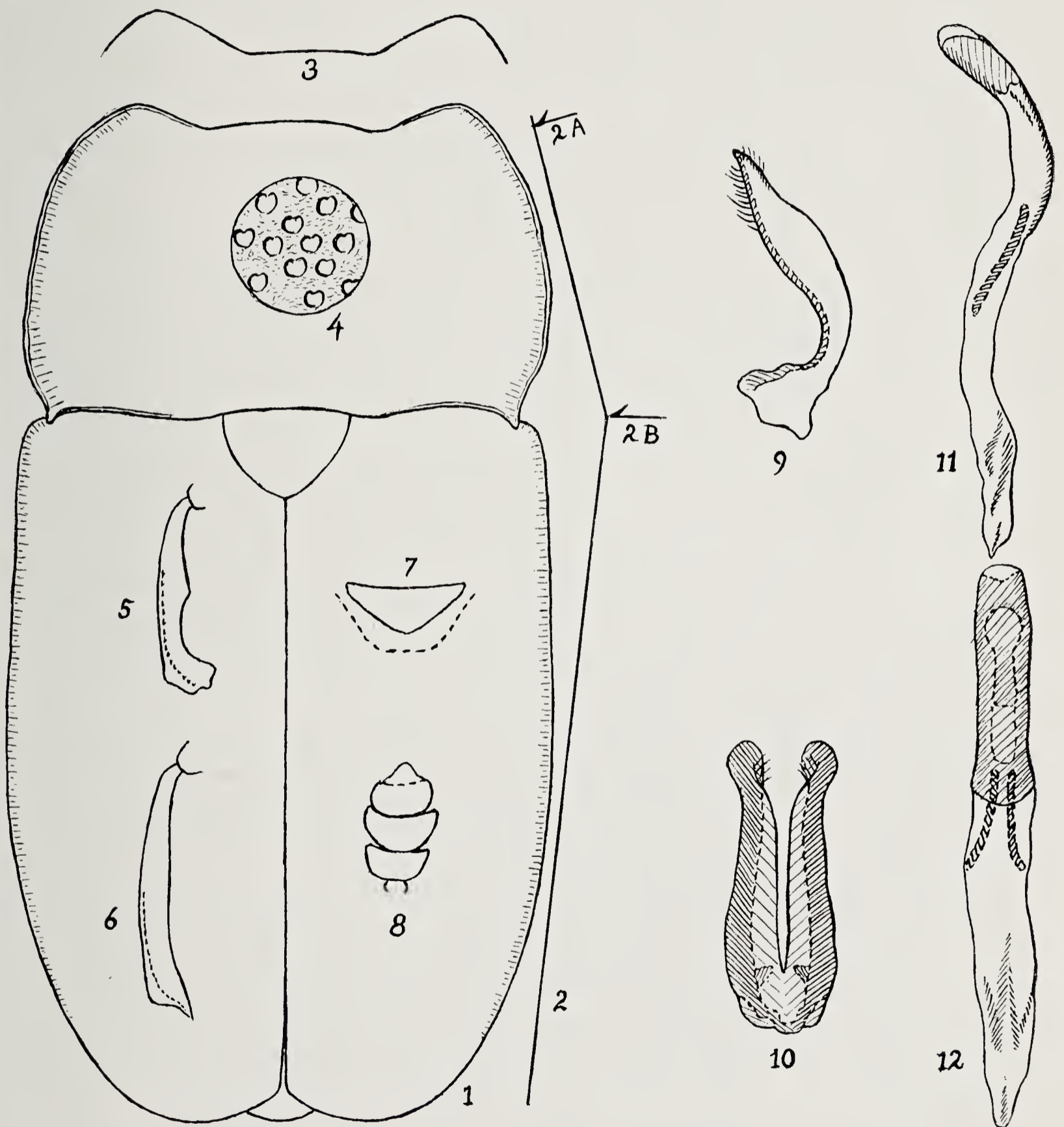
A large (\pm 3.5 mm.) *Epuraea* with greatly enlarged eleventh antennal segment and feebly developed male mesotibiae. Color pale fuscous with legs, epipleurae, underside of head and prothorax more pale. A more or less pale area inside of each elytral humerus. Antennae becoming pale basally, club fuscous.

Vertex with rather shallow punctures separated by less than their diameters, punctures about same size as eye facets. Antennal club (Fig. 20) in both sexes with eleventh segment about as large as ninth and tenth segments combined. Submentum triangular, feebly convex, punctures separated on average by slightly less than their diameters. Antennal grooves (Fig. 19) moderately distinct. Anterior margin of prothorax emarginate as in Fig. 15. Prothorax with length to width as 1-1.71 (1.68 to 1-1.76) and width of prothorax to width of elytra as 1 to 1.04. Surface of pronotum vaguely uneven, much as in *lengi*. Lateral margins of prothorax feebly arcuate, narrowly explanate, very feebly reflexed, as in Fig. 13. Hind angles of prothorax forming an angle of about 100°. Disc of pronotum with punctures separated by about their diameters, intervals finely distinctly alutaceous, each puncture bearing a recumbent golden hair about .06 mm. long.

Elytra conjointly with width to length as 1-1.17 (1-1.15 to 1-1.19), elytral lateral margins more explanate and reflexed than pronotal margins; apices conjointly truncately rounded, sutural margins dehiscent at tip. Disc of elytra punctate about as on pronotum with the

intervals more obsoletely alutaceous; each puncture bearing a recumbent golden hair about .06 mm. long.

Both sexes have the mesotibiae and metatibiae with three fine rows of spines and hairs along outer side but much less developed than in *alternata*. The male mesotibiae and metatibiae enlarged as in Figs. 17, 18. Total length 3.7-4.1 mm. Total length of holotype male 3.8 mm., of allotype 3.7 mm., of paratype male 4.1 mm. Length to posterior end of elytra: of holotype 3.4 mm., of allotype 3.2 mm., of paratype 3.7 mm.



Figs. 1-12. *Epuraea corticina*, male: 1, prothorax and elytra. 2, lateral view of axis of prothorax and elytra. 2A, line of sight for Fig. 3. 2B line of sight for Fig. 1. 3, anterior margin of pronotum. 4, punctation of disc of pronotum with pubescence omitted. 5, dorsal view of mesotibia. 6, dorsal view of metatibia. 7, submentum and antennal grooves. 8, antennal club. 9, lateral view of tegmen. 10, dorsal view of tegmen. 11, lateral view of median lobe. 12, dorsal view of median lobe.

This species is distinctive in the greatly enlarged terminal antennal segment. The only other *Epuraea* with this characteristic is the Holarctic *depressa* (Illiger), but *depressa* is smaller (2.5-3.5 mm.), much more convex, and has simple male mesotibiae. *E. eximia* appears to be related to *lengi* in the uneven pronotal surface, very narrow pronotal margins, and feebly developed male mesotibiae. But the prothoracic hind angles of *eximia* are more acute and the prothoracic emargination much deeper. From *rufida* this species differs in the deeper prothoracic emargination and the much less developed male mesotibiae.

Type material: Holotype, male, Vowell's Mill, Louisiana, ex C. W. Leng in the author's collection. Allotype, female, and paratype, male, same data as holotype (CTP).¹

Epuraea corticina Erichson

(Figs. 1-12)

Epuraea corticina Er., 1843, in Germar, Zeitschr. für Ent., 4, 270.

A large (\pm 3.8 mm.) *Epuraea* with deep prothoracic emargination, prominent acute prothoracic hind angles and greatly expanded male mesotibiae. Color fuscous, with head, lateral thirds of pronotum, margins of elytra, legs, underside of prothorax, first and fifth abdominal sterna more or less testaceous. The center third of pronotum tending to piceous.

Vertex with punctures separated by less than their diameters, punctures about same size as eye facets. Antennae fuscous, becoming paler basally, club as in Fig. 8. Submentum (Fig. 7) triangular, feebly convex, punctures separated by a little more than their diameter. Anterior margin of prothorax deeply emarginate as in Fig. 3. Prothorax with length to width as 1-1.55 (1-1.51 to 1-1.62) and width of prothorax to width of elytra as 1 to 1.06. Lateral margins of prothorax rather strongly arcuate but very narrowly explanate and very feebly reflexed, as in Fig. 1. Hind angles of prothorax prominent and forming an angle of about 85°. Disc of pronotum with punctures separated on average by a little more than their diameters, intervals finely alutaceous, each puncture bearing a recumbent hair about .04 mm. long.

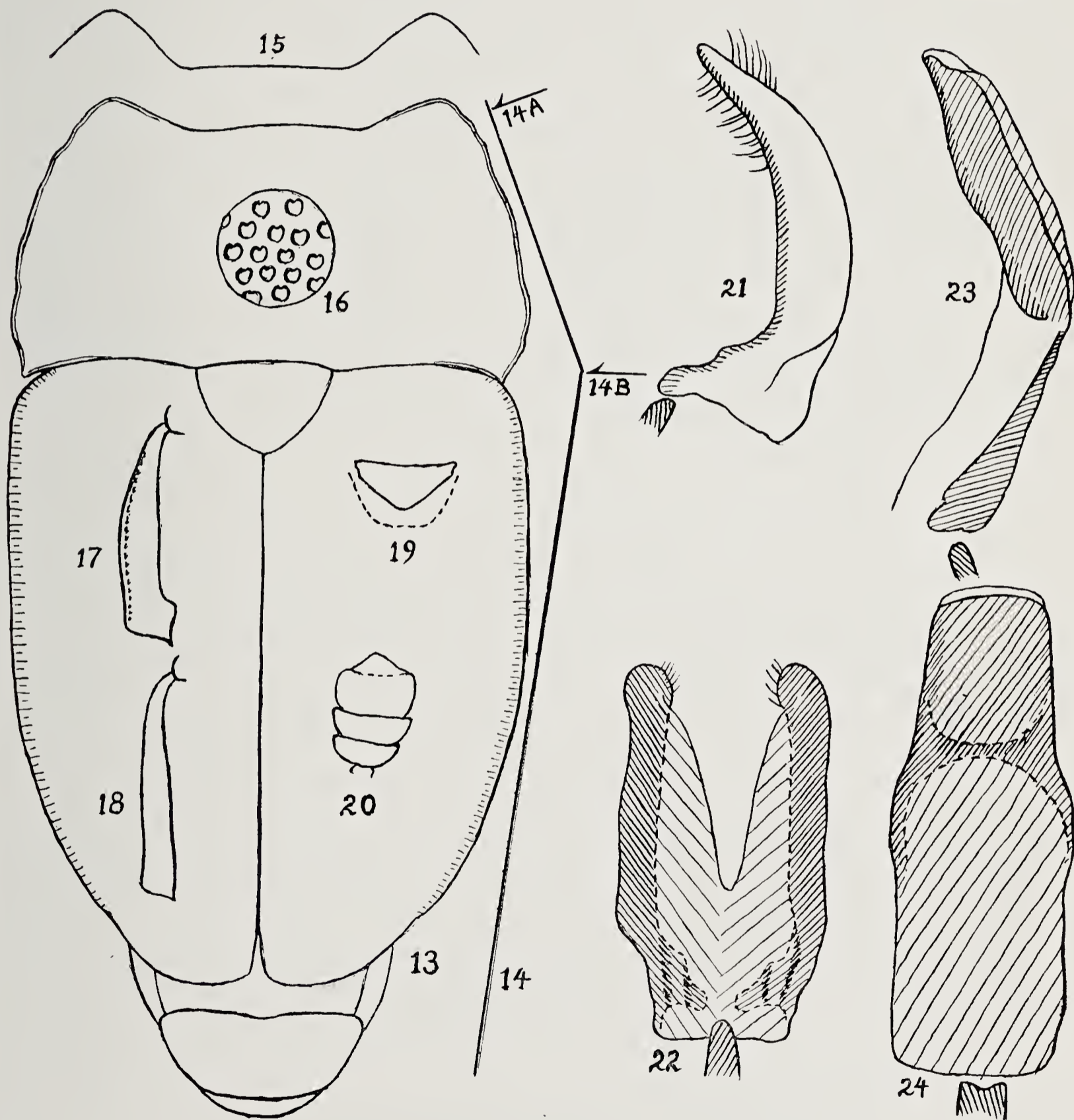
Elytra conjointly with width to length as 1-1.26 (1-1.22 to 1-1.31), elytral lateral margins distinctly more reflexed than pronotal margins, only the reflexed portion shown in Fig. 1; apices conjointly truncately rounded; sutural margins feebly dehiscent at tip. Disc of elytra slightly more finely and more sparsely punctate than pronotum, intervals finely alutaceous, each puncture bearing a recumbent golden hair about .06 mm. long.

Both sexes have the mesotibiae and metatibiae with three fine rows of spines and hairs along outer side but much less developed than in *alternata*. The male mesotibiae and metatibiae enlarged as in Figs. 5, 6. Length 3.0-3.9 mm., of plesiotype male 3.9 mm.

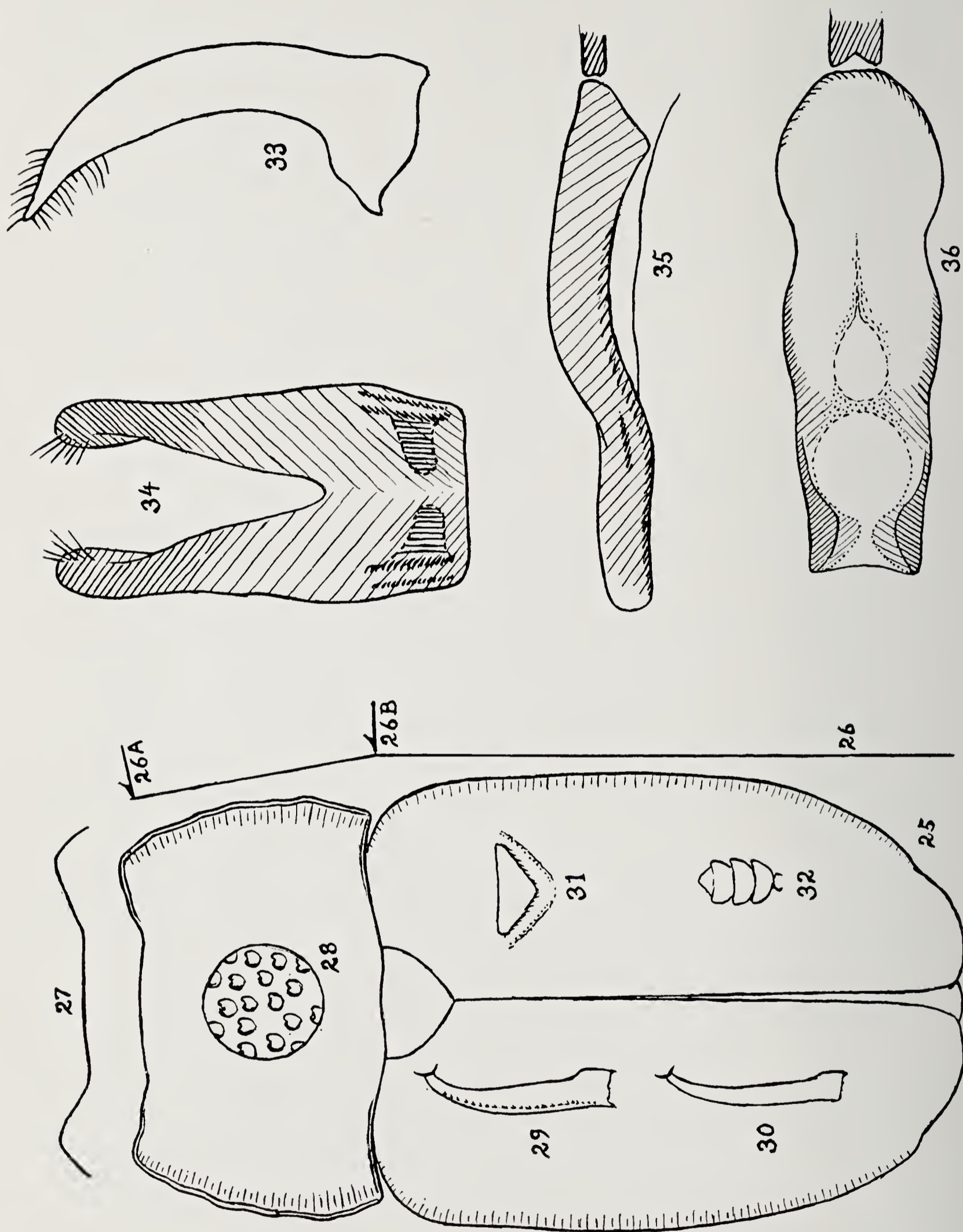
This species is readily recognized by prominent acute hind pronotal angles, the usually much darker center third of pronotum, less convex prothorax, the unusually deep prothoracic emargination, and the distinctive male mesotibiae.

¹Specimens in the collections of the following individuals and institutions were studied and are referred to by abbreviations as follows: (AMNH) American Museum of Natural History; (CAF) C. A. Frost in Museum of Comparative Zoology; (CAS) California Academy of Sciences; (CNC) Canadian National Collection; (CTP) C. T. Parsons; (CU) Cornell University; (GHN) G. H. Nelson; (HCF) H. C. Fall in Museum of Comparative Zoology; (HFH) H. F. Howden; (LRG) L. R. Gillogly; (MCZ) Museum of Comparative Zoology; (Un WIS) University of Wisconsin; (USNM) U. S. National Museum; (WAC) W. A. Connell at the University of Delaware.

Type material: Holotype, male, in the Knoch collection in the Berlin Museum not examined. The type locality is stated as North America but is presumably eastern Pennsylvania. Erickson's statement that the male mesotibiae are similar to those of the European *pusilla* agrees with *corticina* as here defined. Plesiotype male from Faison, N. C. (CTP).



Figs. 13-24. *Epuraea eximia*, male holotype: 13, prothorax and elytra. 14, lateral view of axis of prothorax and elytra. 14A, line of sight for Fig. 15. 14B, line of sight for Fig. 13. 15, anterior margin of pronotum. 16, punctation of disc of pronotum with pubescence omitted. 17, dorsal view of mesotibia. 18, ventral view of metatibia. 19, submentum and antennal grooves. 20, antennal club. 21, lateral view of tegmen. 22, dorsal view of tegmen. 23, lateral view of median lobe. 24, dorsal view of median lobe.



Figs. 25-36. *Epuraea lengi*, male holotype: 25, prothorax and elytra. 26, lateral view of axis of prothorax and elytra. 26A, line of sight for Fig. 27. 26B, line of sight for Fig. 25. 27, anterior margin of pronotum. 28, punctation of disc of pronotum with pubescence omitted. 29, dorsal view of mesotibia. 30, ventral view of metatibia. 31, submentum and antennal grooves. 32, antennal club. 33, lateral view of tegmen. 34, dorsal view of tegmen. 35, dorsal view of median lobe. 36, lateral view of median lobe.

This species occurs in Ontario, Quebec, Minnesota, Wisconsin, Indiana, New York, Massachusetts, Pennsylvania, Maryland, Delaware, Virginia, District of Columbia, North Carolina, South Carolina, Kentucky, Tennessee, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Missouri, Kansas, and Iowa.

Ontario: Prince Edward Co., C. S. Brimley (CAS); Quebec: Old Chelsea, 15 May, S. D. Hicks (CNC); Minnesota: Minneapolis, 31 July 1917, F. C. Fletcher (CU); Wisconsin: Port Edwards and Nekosa, Wood Co., 20 June-23 October, chiefly during September, W. W. Barrett and L. H. McMullen (Un WIS) (CTP); Indiana: Marion Co., 7 June 1929 (CU); New York: Staten Island (CTP); Massachusetts: Natick, 30 July, C. A. Frost (GHN), Framingham 9 October, 26 May, C. A. Frost (GHN) Berlin, 7 July (LRG); Pennsylvania: West Grove, 27 April 1953, W. A. Connell (WAC), Dauphin Co., 19 August 1928, J. N. Knull (CAS); Maryland: College Park, 30 September, G. H. Nelson (GHN), Elk Neck State Park, 25 April 1959, W. A. Connell (WAC); Delaware: Newark, 1 April 1960, W. A. Connell (WAC), Cheswold, July 1954, W. A. Connell (WAC), Georgetown, 10 November, 1954, W. A. Connell (WAC); Virginia: Dismal Swamp, Deep Creek, 8 May, G. H. Nelson (GHN) (CTP); District of Columbia: April, May, July, Washington (USNM) (CTP); North Carolina: Chapel Hill, 21 October 1885 (CU), Raleigh, 9 March 1950 H. & A. Howden (HFH) (CTP) (CAF), Faison, 27 October 1950 H. Howden (HFH) (CTP), Lake Junaluska, 14 November 1952, J. S. Royce (USNM) (CTP); South Carolina: Charleston (MCZ); Kentucky: state label (CU); Tennessee: state label (MCZ); Georgia: Dunwoody (WAC), Athens, 17 May 1926 (AMNH); Florida: St. Augustine (MCZ); Alabama: Hazel, 10 April 1923 (AMNH), Mobile (USNM); Mississippi: Lucedale, 6 and 26 December 1929, H. Dietrich (CU) (HCF), North Augusta, 16 October, 16 December, 27 December, 6 March 1930 H. Dietrich (CU), Meridian (USNM); Louisiana: Vowell's Mill (CTP), Bayo Sara, 23 June, E. A. Schwarz (USNM); Arkansas: Hope (HCF), state label (CTP); Missouri: Salem, December 1952, W. D. Buchanan (USNM) (CTP); Kansas: Douglas Co.; Iowa: Burlington (MCZ).

Ethology. This species may be involved in the transmission of oak wilt, *Chalara quercina*, since it has been collected, chiefly during the fall, on oak wilt fungus mats in Wisconsin, North Carolina, and Missouri. In Wisconsin McMullen collected a larva on a fungus mat on September 11. The adult emerged on November 6. Adults have also been taken in Pennsylvania at sap flow of white oak stump in April, in North Carolina at sap flow of *Liquidambar styraciflua* in October. It has been collected in Alabama at *Crataegus* blossoms during April and in Virginia at tulip tree blossoms in May.

Epuraea lengi new species

(Figs. 25-36)

A rather large (\pm 3 mm.) *Epuraea*, usually testaceous rarely fuscous, with feebly developed male mesotibiae and prothorax feebly emarginate anteriorly.

Vertex with rather deep punctures separated by less than their diameters, punctures

about same size as eye facets. Antennae testaceous with the eleventh, sometimes also the tenth, segment fuscous; rarely the entire antenna fuscous; club unusually long as in Fig. 32. Submentum (Fig. 31) triangular, flat, punctures dense separated by slightly less than their diameters; antennal grooves (Fig. 31) moderately distinct. Anterior margin of prothorax feebly emarginate as in Fig. 27. Prothorax with length to width as 1-1.64 (1-1.58 to 1-1.70) and width of prothorax to width of elytra as 1 to 1.1. Pronotal surface tending to be uneven. Lateral margins of prothorax as in Fig. 25, very feebly explanate and reflexed, feebly arcuate. Hind angles of prothorax forming angles of about 115° . Disc of pronotum with punctures separated by less than their diameters, intervals obsolete granular, each puncture bearing a recumbent golden hair about .05 mm. long.

Elytra conjointly with width to length as 1-1.27 (1-1.23 to 1-1.31), elytral lateral margins more broad and more reflexed than pronotal margins, only the reflexed portion in Fig. 25; apices conjointly truncately rounded; sutural margin feebly dehiscent at tip. Disc of elytra punctate as the prothorax, each puncture bearing a recumbent golden hair .04-.08 mm. long.

Both sexes have mesotibiae and metatibiae with three fine rows of spines and hairs along outer side. The male mesotibiae feebly enlarged apically (Fig. 29) and the male metatibiae very feebly enlarged at apical fifth. Length 2.6-3.5 mm., of holotype male 3.3 mm., of allotype 3.0 mm.

This species differs from the other four species in the shallow emargination of the prothorax, narrower lateral margins of the prothorax, and from all but *eximia* in the feebly expanded male mesotibiae.

Type material: Holotype, male, 2000-3700 ft., Clayton, Georgia, June 1909, C. W. Leng in the author's collection (CTP). Allotype, female, same data as holotype, in the author's collection (CTP).

Paratypes are known from New York, New Jersey, Pennsylvania, District of Columbia, Delaware, West Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana and Texas.

New York: New York, Central Park, L. I. (sic), 7 April 1918 (CU); New Jersey: Linwood, 1 July 1944, J. W. Green (CAS), Cape May, 13 July 1930, J. W. Green (CAS); Pennsylvania: state label (MCZ); District of Columbia: Washington 11, 25 April, 2 May (USNM) (CTP); Delaware: Newark, April 1908 (WAC); West Virginia: Smoke Hole, Pendleton Co., 7 August 1930, J. G. Needham (CU); North Carolina: state label (MCZ), Black Mt., 4 July 1940, J. W. Green (CAS); South Carolina: Florence, 30 June 1952, V. M. Kirk (WAC); Georgia: same data as holotype (CTP) (LRG); Florida: Gainesville, 5 April 1939, 28 March 1934, G. B. Merrill (Fla. Plant Board) (CAF); Alabama: Mobile, 21 May 1910, 19 April 1910, H. P. Loding (CAF) (CU), Auburn, 18 April 1940, E. C. Van Dyke (CAS), Daphne, 3 April (CU); Spring Hill, 6 May 1917, H. P. Loding (CU) (CTP); Mississippi: Leakesville, 8 April 1931, H. Dietrich (CU), Lucedale, 29 March 1932, H. Dietrich (CU); Louisiana: Winnfield, 19 May 1916 (HCF); Texas: state label (USNM) (CTP).

Ethology. In contrast to *rufida* and *alternata*, *lengi* appears in spring and early summer.

***Epuraea alternata* new species**

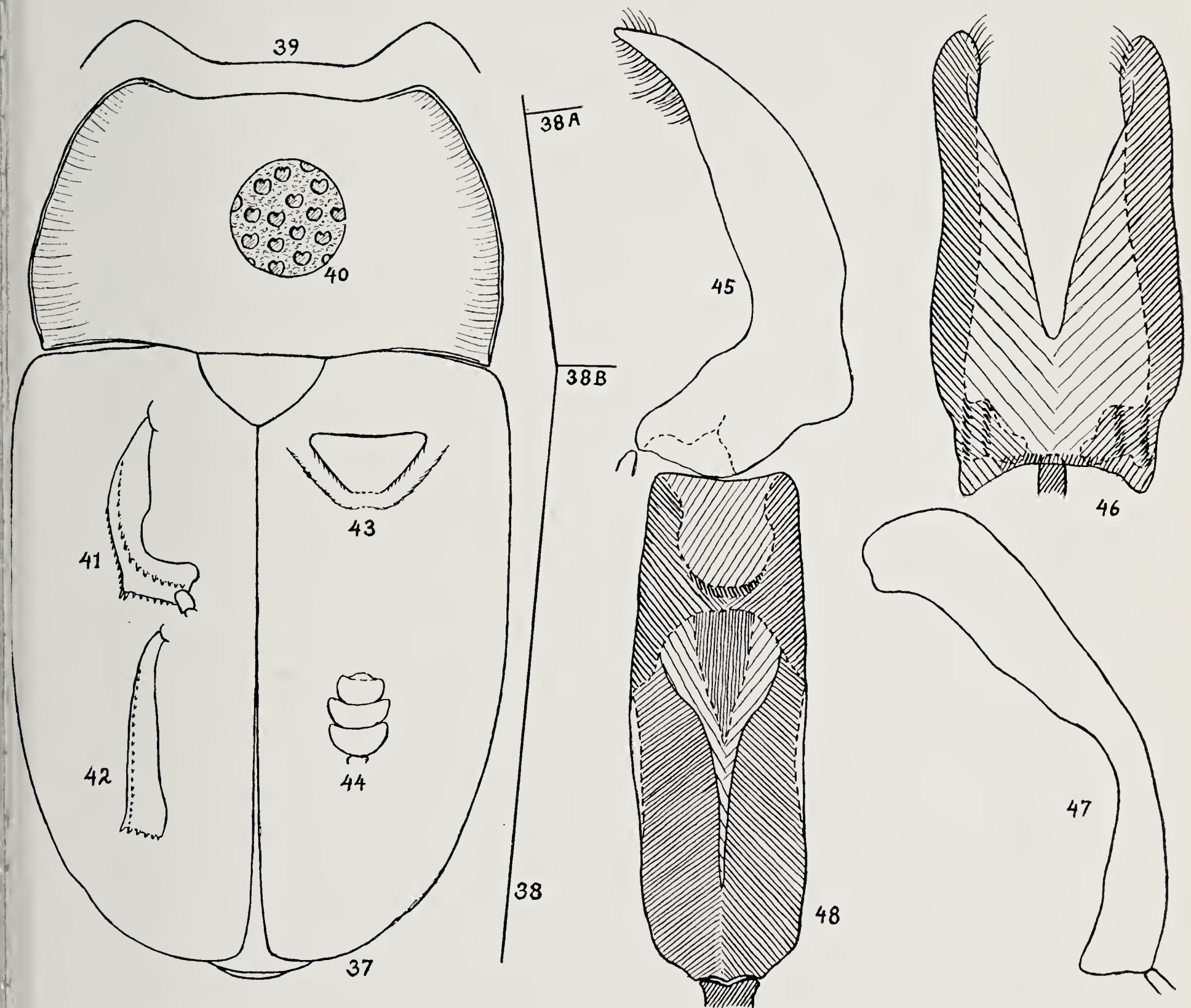
(Figs. 37-48)

A large (\pm 3.8 mm.) convex *Epuraea* with very distinctive mesotibiae in both sexes. Color fuscous, appendages, pygidium, and underside paler.

Vertex with shallow punctures separated by less than their diameters, punctures larger

than eye facets. Antennae uniformly fuscous, slightly paler than pronotum but much darker than legs, club as figured (Fig. 44). Submentum (Fig. 43) trapezoidal, feebly convex, punctures very dense, about one-half their diameters apart, antennal grooves moderately distinct (Fig. 43). Anterior margin of prothorax emarginate as in Fig. 39. Prothorax with length to width as 1-1.7 (1-1.55 to 1-1.20) and width of prothorax to width of elytra as 1 to 1.06. Lateral margins of prothorax as in Fig. 37, feebly reflexed, evenly arcuate. Hind angles of prothorax forming angles of about 120° . Disc of pronotum with punctures separated on average by about their diameters, intervals finely granular, each puncture bearing a recumbent golden hair about .06 mm. long.

Elytra conjointly with width to length as 1-1.18 (1-1.06 to 1-1.20); elytral lateral margins as reflexed as pronotal margins, only the reflexed portion indicated in Fig. 37; apices con-



Figs. 37-48. *Epuraea alternata*, male holotype (except Figs. 45-48, which are of male paratype): 37, prothorax and elytra. 38, lateral view of axis of prothorax and elytra. 38A, line of sight for Fig. 39. 38B, line of sight for Fig. 37. 39, anterior margin of pronotum. 40, punctation of disc of pronotum with pubescence omitted. 41, dorsal view of mesotibia. 42, ventral view of metatibia. 43, submentum and antennal grooves. 44, antennal club. 45, lateral view of tegmen. 46, dorsal view of tegmen. 47, lateral view of median lobe. 48, dorsal view of median lobe.

jointly truncately rounded, sutural margin feebly dehiscent at tip. Disc of elytra punctate as the prothorax, intervals finely granular, each puncture bearing a recumbent golden hair about .07 mm. long.

Both sexes have the mesotibiae and metatibiae with three strongly developed ridges with rows of spines and hairs along outer sides, the more dorsal ridge becoming entirely dorsal apically. Male mesotibiae (Fig. 41) enlarged apically more than in any other Holarctic *Epuraea* known to the writer. The male metatibiae are feebly enlarged at apical fourth (Fig. 42). Length 3.00-3.9 mm., of holotype male 3.9 mm.

This species is closely related to *rufida* but *alternata* differs in being more convex, especially the prothorax, the anterior angles of the prothorax more approximate resulting in more arcuate lateral margins, upper surface slightly less densely punctate, apices of elytra more truncate because sutural angles are less rounded, and less elongate in outline. Also *alternata* has more extremely developed male mesotibiae (Fig. 41) and different male metatibiae (Fig. 42).

Type material: Holotype, male, on rotting peach 29 September 1950 at College Park, Maryland, G. H. Nelson in the M.C.Z. (C. A. Frost coll.). Allotype, female, same data as holotype in G. H. Nelson collection. Also 115 paratypes as follows.

This species is known from Vermont, New York, Pennsylvania, Maryland, Delaware, Virginia, North Carolina, Tennessee, Ohio, Indiana, Michigan, Wisconsin, and Kansas.

New York: Geneva, 31 August 1954, W. A. Connell (WAC); Pennsylvania: Wind Gap, 28 June 1941, J. W. Green (CAS); Maryland: Myersville, 18 June 1955, W. A. Connell (WAC), Beltsville, 21 September 1954, W. A. Connell (WAC) (CTP), series with same data as holotype (GHN) (WAC) (CTP), Hancock, 6 September 1956, W. A. Connell (WAC) Edgewood Arsenal, 24 June, 1, 5 July 1969, A. & A. Gillogly, in Alan Gillogly coll. Delaware: Newark, 30 May-3 November, chiefly June and September, W. A. Connell (WAC) (CNC) (CTP), Laurel, 14 May 1932, L. L. Williams (WAC); Virginia: Alexandria Co., 22 June 1920; North Carolina: Black Mts., 14 June (LRG); Tennessee: Chilhowee Mts., 28 June, 20 October 1954 (HFH); Ohio: Mad T., Pickaway Co., 25 October 1931, E. S. Thomas (LRG); Indiana: Marion Co., 7 June 1929 (CU); Knox Co., 7 June 1937, J. M. Amos (WAC); Michigan: E. S. George Reserve, Livingston Co., 19 September 1947, K. Bohnsack, in his collection; Wisconsin: 14 June, 1, 7, 13 July, 17, 24, 31 August 1954, at Univ. of Wis. campus, Dane Co. (Un WIS) (CTP); Missouri: St. Louis, 10 October 1948, W. S. Craig (CAF); Kansas: Lawrence, L. W. Brown (atypical so not a type) (CNC).

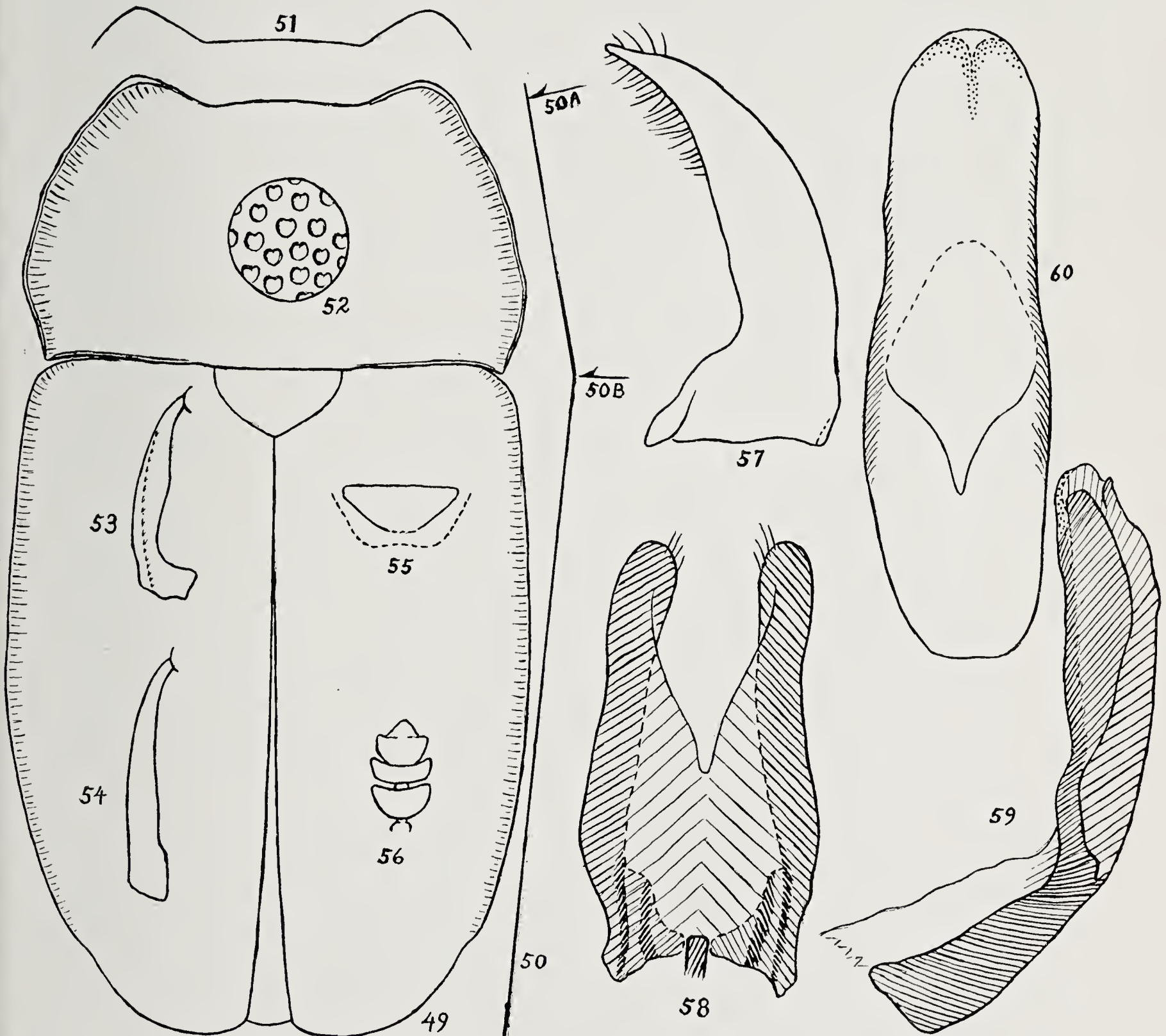
Ethology. The adults occur chiefly in June and again in the fall. It has been taken at flowers of *Lornicera*, apple drops, in banana trap, in pawpaw, at sap flow, at rotting melon and peach, at sap of chestnut oak ex rotting *Conopholis americana*. Vermont: Manchester, 11, 17 August 1969, C. Parsons (CTP);

***Epuraea rufida* (Melsheimer)**

(Figs. 49-60)

A large (± 4 mm.) convex *Epuraea* with greatly expanded male mesotibiae. Color uniformly fuscous except that the legs may be distinctly more pale.

Vertex with punctures separated by less than their diameters, punctures larger than eye facets. Antennae fuscous but may become paler basally, club as figured (Fig. 56), usually the ninth and tenth segments more separated. Submentum (Fig. 55) indistinctly trapezoidal, feebly convex, punctures very dense, about one-half their diameters apart, the male with tuft of golden hair in center at anterior margin. Anterior margin of prothorax emarginate as in Fig. 51. Prothorax with length to width as 1-1.6 (1-1.55 to 1-1.67) and width of prothorax to width of elytra as 1 to 1.06. Lateral margins of prothorax feebly arcuate, narrowly explanate, very feebly reflexed as in Fig. 49. Hind angles of prothorax forming an angle of about 110° .



Figs. 49-60. *Epuraea rufida*, male neotype. 49, prothorax and elytra. 50, lateral view of axis of prothorax and elytra. 50A, line of sight for Fig. 51. 50B, line of sight for Fig. 49. 51, anterior margin of pronotum. 52, punctation of disc of pronotum with pubescence omitted. 53, dorsal view of mesotibia. 54, dorsal view of metatibia. 55, submentum and antennal grooves. 56, antennal club (not from neotype). 57, lateral view of tegmen. 58, dorsal view of tegmen. 59, lateral view of median lobe. 60, dorsal view of median lobe. Note: Figures 4, 9, 10, 11, 12, 16, 21, 23, 24, 28, 33, 34, 35, 36, 40, 45, 46, 47, 48, 52, 57, 58, 59, 60 enlarged 3x the other figures.

Disc of pronotum with punctures separated by about one-half their diameters, intervals finely irregularly granular, each puncture bearing a recumbent golden hair about .04 mm. long

Elytra conjointly with width to length as 1-1.3 (1-1.26 to 1-1.36), elytral lateral margins about as reflexed as pronotal margins, only the reflexed portion shown in Fig. 49 apices conjointly truncately rounded, sutural margin at tip very feebly dehiscent. Disc of elytra punctate as the prothorax, intervals finely granular, each segment bearing a recumbent golden hair about .06 mm. long.

Both sexes have the mesotibiae and metatibiae with three rows of spines and hairs along outer sides but much less developed than in *alternata*. The male mesotibiae and metatibiae enlarged as in Figs. 53, 54. Length 2.7-4.7 mm. of neotype male 4.5 mm.

For comparisons with *rufida* see under the other species.

Type material: Male from Pennsylvania, in the Mus. Comp. Zool. (Leconte collection), is here designated the neotype. Since Leconte removed many of Melsheimer's types to his collection, underlined the "Mels." on the label, and no *rufida* are now in the Melsheimer collection, this neotype specimen is very likely a syntype.

This rare species is known from Quebec, New York, Pennsylvania, Ohio, Maryland, North Carolina, and Alabama.

Quebec: Chelsea, 21 April, W. J. Brown (CNC); New York: Clermont, 5 November 1934, H. Dietrich (CTP); Pennsylvania: state label (MCZ, Leconte coll.); Ohio: Athens, 18 April 1936, W. Stehr (LRG); Maryland: Cabin John, Potomac River, 1 April 1951, G. H. Nelson (GHN), 2 miles east of Silver Springs, N. W. Branch, 21 October 1950, G. H. Nelson (GHN) (USNM) (CAF) (Univ. of Calif. at Davis) (CTP); North Carolina: July, Black Mts. (AMNH); Alabama: June, Monte Sane, Madison Co. (LRG).

Ethology. This is evidently a spring and fall species. G. H. Nelson collected the Cabin John specimen under hickory bark and the series at Silver Springs at "black gummy fungus blisters under oak bark".